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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,920

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Galileo June Adeva Destura

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TWO PRUDENTIAL PLAZA, SUITE 4900  
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EXAMINER

SITTA, GRANT

ART UNIT

PAPER NUMBER

2629

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,920	<b>Applicant(s)</b> DESTURA ET AL.	
	<b>Examiner</b> GRANT D. SITTA	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa et al (5,907,375) hereinafter, Nishikawa in view of Hioki et al (7,109,967) hereinafter, Hioki.

4. In regards to claim1, Nishikawa discloses the limitations of a touch sensitive display (100) comprising (**abstract**) a display element (101) having a viewer proximal

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side and a viewer distal side (fig. 5 (43) front and back); and a touch sensitive element (103) disposed on the viewer distal side of the display element (101) (**fig. 5 (42) col. 10, lines 5-10**) and comprising :

a first conductive layer (113) comprising a first plurality of conductors (**fig. 5 (52) and col. 11, lines 55-60**);

a second conductive layer (115) comprising a second plurality of conductors (**fig. 5 (52) and col. 11, lines 55-60**); and

a pressure sensitive layer (117) (**fig. 5 (53 and 55)**) sandwiched between the first conductive layer (113) and the second conductive layer (115) and operable to modify an electrical conductivity between a first conductor of the first plurality of conductors and a second conductor of the second plurality of conductors in response to a pressure point resulting from an applied pressure (**col. 11, lines 35-67**).

Nishikawa differs from the claimed invention in that Nishikawa does not expressly disclose using an active matrix display.

However, Hioki teaches a system and method for using an active matrix display (col. 14, line 40 of Hioki).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the display device of Nishikawa to be an active matrix display device as taught by Hioki in order to provide for a light weight display, with good image quality, faster response time, and sharper display than a passive matrix display.

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5. In regards to claim 2, Nishikawa teaches a touch sensitive display as claimed in claim 1 wherein the touch sensitive element (103) comprises a plurality of pressure sensitive elements **(abstract and col. 11, lines 35-67)**.

6. In regards to claim 3, Nishikawa teaches touch sensitive display as claimed in claim 2 wherein the plurality of touch sensitive elements is formed by the first and second plurality of conductors **(abstract and col. 11, lines 35-67)**.

7. In regards to claim 4, Nishikawa as modified by Hioki teaches a touch sensitive display as claimed in claim 2 wherein the plurality of 20 pressure sensitive elements is aligned with pixels **(col. 11, lines 20-56 Nishikawa)** of the active matrix display element (101) **(col. 14, line 40 of Hioki)**.

8. In regards to claim 5, Nishikawa teaches a touch sensitive display as claimed in claim 1 wherein the first plurality of conductors forms rows of a pressure sensitive array **(fig. 6 rows in 42 bottom layer 53)**.

9. In regards to claim 6, Nishikawa teaches a touch sensitive display as claimed in claim 1 wherein the second plurality of conductors forms columns of a pressure sensitive array **(fig. 6 (42 columns in top layer))**.

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10. In regards to claim 7, Nishikawa discloses the limitations of the pressure sensitive layer (117)(**abstract**).

Nishikawa differs from the claimed invention in that Nishikawa does not expressly disclose using piezoelectric material.

However, Hioki teaches a system and method for using piezoelectric material (**col. 8, lines 37-52 of Hioki**) since the piezoelectric material is used to generate an electric potential in response to applied mechanical stress. .

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Nishikawa to include the use of piezoelectric material in the pressure sensitive layer as taught by Hioki in order to provide electric potential in response to mechanical stress which is beneficial generating high voltages, electronic frequency generation, micorbalances and ultra fine focusing of optical assemblies.

11. In regards to claim 9, Nishikawa teaches a touch sensitive display as claimed in claim 1 further comprising detection means operable to determine a position of the pressure point in response to the change in electrical conductivity between the first conductor and the second conductor (**col. 9, lines 43-67 and col. 11, lines 35-67**).

12. In regards to claim 15, Nishikawa teaches a portable device comprising a touch sensitive display as claimed in claim 1 (**col. 1, lines 10-11**).

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13. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa and Hioki, in view of Applicant Admitted Prior Art, hereinafter referred to as AAPA.

14. In regards to claim 11 Nishikawa and Hioki differ from the claimed invention in that Nishikawa and Hioki do not expressly disclose wherein the detection means comprise a signal source (309) for outputting a signal on the first conductor and a sense amplifier (311) coupled to the second conductor for detecting an electrical signal caused by an electrical conductivity being formed between the first conductor and the second conductor in response to the pressure point.

However, AAPA teaches a system and method for wherein the detection means comprise a signal source (**fig. 3 (309)**) for outputting a signal on the first conductor and a sense amplifier (**fig. 3 (311)**) coupled to the second conductor for detecting an electrical signal caused by an electrical conductivity being formed between the first conductor and the second conductor in response to the pressure point. (**fig. 3 [0066-0069]**).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Nishikawa and Hioki to include the use of wherein the detection means comprise a signal source (309) for outputting a signal on the first conductor and a sense amplifier (311) coupled to the second conductor for detecting an electrical signal caused by an electrical conductivity being formed between the first conductor and the second conductor in response to the pressure point as taught by AAPA in order to

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amplify signals from the pixels to increase the distance a signal can travel and allow for greater space between components.

15. In regards to claim 12, Nishikawa and Hioki as modified by AAPA touch sensitive display as claimed in claim 11 wherein the electrical signal 20 is an electrical charge and the sense amplifier (31 I) is a charge sensitive amplifier **(fig. 3 (311) AAPA)**.

16. In regards to claim 13, Nishikawa and Hioki as modified by AAPA teaches a touch sensitive display as claimed in claim 11 further comprising a display controller having a buffer amplifier (309) operable to provide a display control signal and wherein the touch sensitive display is operable to couple a single amplifier (309) as the buffer amplifier (309) in a display driver configuration and as the signal source (309) in a pressure point detection configuration **(fig. 3 (309)) AAPA)**.

17. In regards to claim 14, Nishikawa and Hioki as modified by AAPA teaches a touch sensitive display as claimed in claim 11 further comprising a display controller having a buffer amplifier (311) operable to provide a display control signal and wherein the touch sensitive display is operable to couple a single amplifier (311) as the buffer amplifier (311) in a display driver configuration and as the sense amplifier (311) in a pressure point detection configuration **(fig. 3 (311) AAPA)**.



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18. Claims 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa and Hioki, in view of Bechtle et. al (US 6,535,091) hereinafter, Bechtle.

19. In regards to claim 8, Nishikawa and Hioki disclose a pressure sensitive layer ( 17) **((abstract) Nishikawa)**

Nishikawa and Hioki differ from the claimed invention in that Nishikawa and Hioki do not disclose wherein the pressure sensitive layer ( 17) comprises Micro-ElectroMechanical (MEM) switches operable to modify the electrical conductivity.

However, Bechtle teaches a system and method for using Micro-ElectroMechanical (MEM) switches operable to modify the electrical conductivity. **(fig. 1 col. 1-2, lines 20-10 of Bechtle).**

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Nishikawa and Hioki to include in the pressure sensitive layer the use of Micro-ElectroMechanical (MEM) switches operable to modify the electrical conductivity as taught by Bechtle because of the added advantages of MEMs of solid stated devices including but not limited to as stated in (col. 1-2, lines 20-10 of Bechtle).

20. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa and Hioki, in view of Perski et. al (US 6,762,752) hereinafter, Perski

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21. In regards to claim 10, Nishikawa and Hioki differs from the claimed invention in that Nishikawa and Hioki do not disclose wherein the detection means is operable to detect a plurality of simultaneous pressure points.

However, Perski teaches a system and method for wherein the detection means is operable to detect a plurality of simultaneous pressure points. **(col. 7, lines 39-60 of Perski).**

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Nishikawa and Hioki to include the use of wherein the detection means is operable to detect a plurality of simultaneous pressure points as taught by Perski in order to allow for multiple inputs which allows for easier and fast input of data.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GRANT D. SITTA whose telephone number is (571)270-1542. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/

Supervisory Patent Examiner, Art Unit 2629

/Grant D Sitta/

Examiner, Art Unit 2629

March 20, 2009